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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/420,772	10/19/1999	OSAMU YAMADA	862.3073	3279

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EXAMINER

LE, BRIAN Q

ART UNIT	PAPER NUMBER
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2623

DATE MAILED: 06/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/420,772

Applicant(s)

YAMADA ET AL

Examiner

Brian Q. Le

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 4/18/2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4,7,12-16 and 19-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 4, 7, 12-16 and 19-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 4/18/2005 has been entered.

Response to Amendment and Arguments

2. Applicant's arguments with regard to claims 1, 4, 7, 12-1 and 19-22 have been fully considered, but are not considered persuasive because of the following reasons:

For claim 1, the Applicant argues (page 13) that Miyashita Reference U.S. Patent No. 6,031,543 does not teach "a line for a low-saturation side cannot convert a substantially minimum input value of a saturation of the image to a substantially minimum output value" and "a line for a high-saturation side cannot convert a substantially maximum input value of a saturation of the image to a substantially maximum output value" as shown in FIG. 38 of Miyashita. The Examiner respectfully disagrees. As indicated in the Final Office Action filed 12/14/2004, the Examiner did not use FIG. 38 for this teaching and this discussion. The Applicant is advised to refer back to the Office Action and the cited locations for the full discussion. In addition, FIG. 16, FIG. 27C, FIG. 29 and FIG. 31 clearly shows the concept of the second conversion line is set independently of the first conversion line which is shown by the Applicant, FIG. 12 of the original specification, since the conversion lines of these Figures are the same comparing to the conversion line of FIG. 12, original disclosure. Clearly, Miyashita shows more than just default conversion line as indicated by the Applicant on page 12 (FIG. 36

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of the Remarks). Furthermore, the Examiner does not see how the second conversion line is set independently from the first conversion line since FIG. 12 shows a single curve with changes of slope. It seems that the original disclosure does not support this limitation.

Thus, the rejections of all of the claims are maintained.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claim 1, 3-4, 7, 12-16, and 19-22 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Regarding claims 1, 16, 19, 21, 22, the language limitations of “wherein the first conversion line converts a substantially minimum input value of a saturation of the image to a substantially minimum output value” and “wherein the second conversion line converts a substantially maximum input value of the saturation of the image to a substantially maximum output value” are not supported in the original disclosure. Also referring to claim 1, the amended limitation “wherein the second conversion line is set independently of the first conversion line” is not supported by the original disclosure (even as indicated by the Applicant, FIG. 12). The Applicant is required to point out the exact page number and line number for the support of this claimed language.

Claims not specifically addressed depend from indefinite antecedent claims.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

6. The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

7. Claims 1, 4, 7, 12-16, and 18 - 20 are rejected under 35 U.S.C. 102(e) as being anticipated by Miyashita U.S. Patent No. 6,031,543.

Referring to claim 1, Miyashita teaches an image processing apparatus comprising:

Saturation calculation (saturation correction) unit (FIG. 16) arranged to calculate saturation information of an image;

A first setting unit, arranged to set a first conversion line for a low-saturation side; (column 6, lines 48-62; column 8, lines 3-15 and 37-55 and column 10, lines 25-44) (Miyashita teaches the data manipulation of parameters for color correction which including hue or saturation (column 8, line 9) for whether at low or high-saturation), wherein the first conversion line converts a substantially minimum input value of a saturation of the image to a substantially

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minimum output value (low saturation/ $a_{\text{MIN}}/b_{\text{MIN}}$) ($a_{\text{MIN}}/b_{\text{MIN}}$ by the linear conversion curve will generate the minimum output value) (Please refer to column 12, lines 30-65; column 13, lines 5-47 and FIG. 33-FIG. 37).

A second setting unit, arranged to set a second conversion parameter for a high-saturation side; (column 6, lines 48-62; column 8, lines 3-15 and 37-55 and column 10, lines 25-44) (Miyashita teaches the data manipulation of parameters for color correction which including hue or saturation (column 8, line 9) for whether at low or high-saturation), wherein the second conversion line converts a substantially maximum input value of a saturation of the image to a substantially maximum output value (high saturation/ $a_{\text{MAX}}/b_{\text{MAX}}$) ($a_{\text{MAX}}/b_{\text{MAX}}$ by the linear conversion curve will generate the maximum output value) (Please refer to column 12, lines 30-65; column 13, lines 5-47 and FIG. 33-FIG. 37), wherein the second conversion line is set independently of the first conversion line (FIG. 16, FIG. 27C, FIG. 29 and FIG. 31).

A saturation conversion characteristic generating unit arranged to generate a saturation conversion characteristic on the basis of the first conversion line, for the low-saturation side, and the second conversion line, for the high-saturation side (column 8, lines 3-29);

A saturation conversion unit (FIG 44 and FIG 45) arranged to convert the saturation (column 3, line 40-44) of the image on the basis of the saturation conversion characteristic.

It is clear that saturation calculation also is saturation correction especially as demonstrated in FIG 16, a saturation correction requires analysis of color and colors saturation conversion.

Referring to claim 4, Miyashita teaches the apparatus further comprising:

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An instruction unit arranged to accept an instruction input by a user (column 3, line 58-60; column 4, lines 1-26) in order to determine the first conversion line, for the low-saturation side, and the second conversion parameter, for the high-saturation side (column 10, lines 22-29).

Referring to claim 7, Miyashita teaches the apparatus wherein the saturation conversion characteristic exhibits a monotonous increase (column 11, line 33-46).

Referring to claim 12, Miyashita discloses the apparatus further comprising:

A detection unit arranged to detect a color distribution of the image (FIG 6, FIG 7 and column 5, line 54);

A generation unit arranged to generate gradation correction information (column 8, line 44-46) of the image on the basis of the color distribution; and

A gradation correction unit arranged to perform gradation correction of the image on the basis of the gradation correction information (column 8, line 22-29 and column 8, line 52-55).

For claim 13, Miyashita also teaches the apparatus wherein said saturation conversion unit (FIG 44 and FIG 45) performs saturation conversion on an image which has undergone the gradation correction (column 9, line 21-24) by said gradation correction unit. Also it is inherent that gradation correction is required during the gradation conversion process which is clearly described by Miyashita.

Referring to claim 14, Miyashita further teaches the apparatus wherein said generation unit comprises:

A highlight calculation unit (FIG 25, FIG 26A, FIG 26B, FIG 26E and FIG 26F) arranged to calculate highlight area information (column 9, line 25-31) of an image on the basis of the color distribution; and

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A white balance calculation unit (FIG 28-115 and 117) arranged to calculate white balance information on the basis of the highlight area information (FIG 29-115 and 117, FIG 30-115 and 117, FIG 31-115 and FIG 32-115) and a predetermined highlight value (column 10, line 24-32, "HL" parameters), and wherein

Said gradation correction unit corrects gradation of the image on the basis of the white balance information and the highlight value (column 10, line 25-44).

It is inherent that highlight and intensity are the white balance calculation. Without these two parameters, white balance calculation can not be processed properly.

Referring to claim 15, Miyashita discloses the apparatus wherein said generation unit comprises:

A shadow calculation unit arranged to calculate shadow information of an image (FIG 25, FIG26C, FIG26D-FIG26F, FIG28-32); and

A black balance calculation unit (FIG 25, FIG26C, FIG26D-FIG26F and FIG28-116 and 117) arranged to calculate black balance information on the basis of the shadow area information (FIG 28, 116-117; FIG 29,116-117; FIG 30, 116-117) and a predetermined shadow value (column 10, line 24-32, "SD" parameters), wherein

Said gradation correction unit corrects gradation of the image on the basis of the black balance information and the shadow value (column 10, line 25-44).

It is inherent that shadow and the intensity are also the black calculation. Without these two significant means, black balance calculation can not be determined.

For claims 16, please refer back to the explanation of claims 1 and 3.

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For claim 19, please refer to claim 1 for all the limitation. Furthermore, Miyashita discussed the concept of recording medium (storage system) (column 1, 64-67) that allow program codes (software or executable program) (column 3, line 62-63) to allow user to control the image processing method. Therefore, it is inherent to have a recording medium comprising program codes of an image processing method comprises the limitation of claim 1.

Regarding claim 20. please refer back to claim 4 for the explanation.

For claims 21-22, please refer back to claims 1 and 19 for the teachings and the explanations.

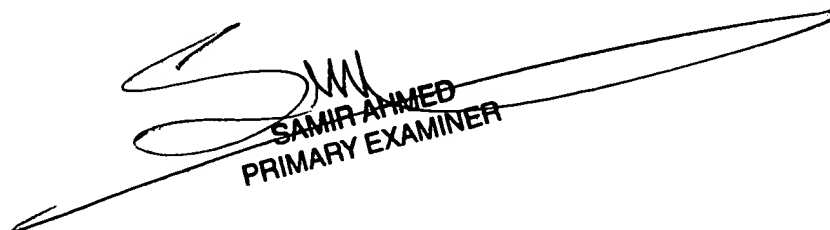
Contact Information

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Q Le whose telephone number is 571-272-7424. The examiner can normally be reached on 8:30 A.M - 5:30 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amelia Au can be reached on 571-272-7414. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9306 for regular communications and 703-872-9306 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

BL
June 14, 2005


SAMI AHMED
PRIMARY EXAMINER

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